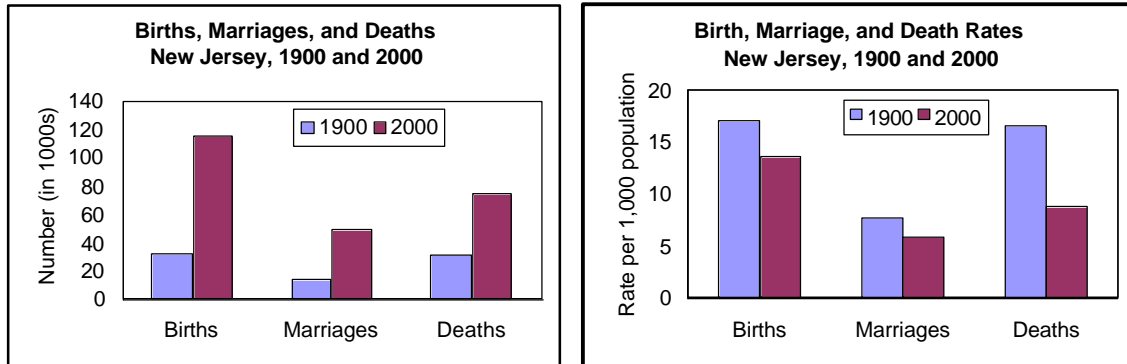


Then and Now in New Jersey: Health Profiles for 1900 and 2000

Much has changed since the beginning of the twentieth century, including the health and population of New Jersey.



Births

A century ago, little was done in terms of prenatal care and monitoring, therefore, not much was reported regarding births other than the total number by county and municipality.

There were 32,270 births reported and recorded in New Jersey in 1900. The birth rate was 17.1 per 1,000 population. In 2000, there were 115,542 births and the birth rate was 13.7 per 1,000 population.

Note that prior to 1901, the statistical year ended on June 30. Therefore, birth, marriage, communicable disease, and death data presented for 1900 are actually for July 1, 1899 – June 30, 1900.

Marriages

Prior to 1898, non-residents were permitted to marry in New Jersey without a license. The license requirement caused the number of marriage certificates recorded to drop and was 14,611 in 1900. The marriage rate was 7.8 per 1,000 population. In 2000, there were 49,302 marriages in New Jersey and the rate was 5.9 per 1,000 population.

Communicable Diseases and Deaths

One hundred years ago, the focus in health statistics was squarely on communicable diseases and deaths. More than 60% of the pages in the 1900 report of vital statistics were dedicated solely to death statistics. In the 1901 report, only four of 75 tables were not solely devoted to death statistics.

There were 31,474 deaths in New Jersey in 1900, the crude death rate was 1,670.9 per 100,000 population, and the age-adjusted death rate was 2,697.4 per 100,000 standard population. In 2000, there were 74,800 deaths, the crude rate was 889.0, and the age-adjusted rate was 852.4. This represents a 68.4% decrease in the age-adjusted death rate. Age-adjusted death rates are used to show what the level of mortality would be if no changes occurred in the age composition of a population over time. Thus, they are better indicators than crude death rates for examining changes in the risk of death over a period of time when the age distribution of the population has changed, as it did between 1900 and 2000. All age-adjusted rates presented here are based on the 2000 U.S. standard population.

Leading Causes of Death

Today, chronic diseases such as heart disease, cancer, and stroke are the leading causes of death. In 1900, acute illnesses and communicable diseases such as acute lung disease, consumption (respiratory tuberculosis), and diarrheal diseases of children were the leading causes of death.

By 1900, the State Board of Health, local health officers, and physicians had measures in place to reduce the spread of communicable diseases. A law requiring the notification of dangerous communicable diseases was passed 1895. From the 1900 annual report of the State Board of Health:

The great value of early notification of cases of communicable diseases is recognized by physicians and health officers in all sanitary districts in which the enforcement of the law has become established, and these progressive communities now demand that every other township and municipality in the State shall obtain and furnish information relating to cases of preventable diseases which occur within their boundaries, and said communities also demand the isolation of patients suffering from such diseases in other districts shall be thorough and effectual, and that the isolation of such patients shall continue until they are no longer a source of danger to other persons, and that the cleansing of infected persons and premises shall be conducted upon approved principles and in accordance with prevailing methods, and the State Board of Health is depended upon to defend these communities against neglect and inefficiency in restricting the spread of these diseases.¹

Measures to limit the spread of communicable diseases included placarding houses; inspecting public water supplies; increasing the number of State Laboratory of Hygiene repositories; reporting and acting on contagious diseases of animals; quarantining maritime vessels, persons, baggage, and merchandise until examined and “purified;” regulating the transportation of dead human bodies; regulating public laundries; inspecting public school buildings and closing them when necessary; disinfecting school books (with formaldehyde); and providing isolation hospitals for the treatment of persons with infectious and contagious diseases. Local boards of health were required to report on most of the measures annually. This vigilance allowed health officials in 1900 to trace an epidemic outbreak of small pox to persons traveling from Virginia and a typhoid fever outbreak in Belmar was traced to a single milk supplier.

There were 3,794 cases of diphtheria, 3,223 cases of scarlet fever, 806 cases of typhoid fever, and 99 cases of small pox reported in 1900 in New Jersey. In the 1900 report, separate sections which included 22-year mortality trend tables and graphs were devoted to ten major health concerns: consumption (3,514 deaths), Bright’s disease (1,617), diphtheria (927), cancer (921), typhoid fever (356), whooping cough (306), measles (231), scarlet fever (220), malarial fevers (84), and small pox (2). Eight of these diseases are communicable. Bright’s disease refers to kidney disease.

In 2000, there were 44,562 cases of invasive cancer, 565 cases of tuberculosis (consumption), 57 cases of pertussis (whooping cough), 49 cases of malaria, and 28 cases of typhoid fever reported to the State. There were no reported cases of diphtheria, measles, scarlet fever, or small pox. There is currently no reporting system in New Jersey for kidney (Bright’s) disease.

In 2000, there were 18,073 cancer deaths and 1,495 deaths due to nephritis, nephrotic syndrome, and nephrosis (kidney disease) of which 14 were labeled “Bright’s disease.” There were 28 deaths due to tuberculosis and one death due to malaria. No deaths were due to diphtheria, typhoid fever, whooping cough (pertussis), measles, scarlet fever, or small pox.

The increase in cancer cases and deaths over the century is due primarily to two factors. First, there is now a wide variety of technology available to aid in the diagnosis of cancer. Many cancer cases and deaths were not diagnosed properly in 1900 and were attributed to other causes. For example, some consumption cases may have actually been lung cancer not tuberculosis. Second, because most communicable diseases are now under better control, people rarely die from them at an early age (with the exception of HIV disease), therefore, they live long enough to develop chronic diseases such as cancer.

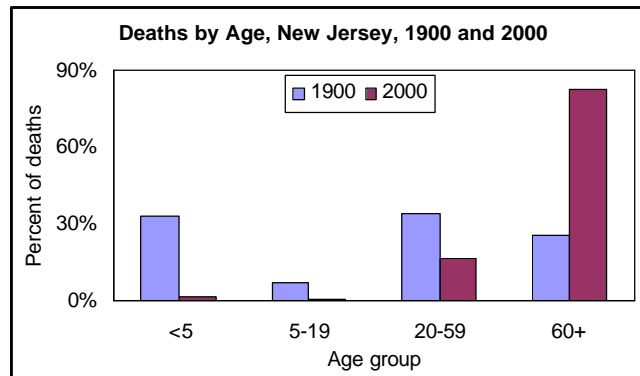
Leading Causes of Death, New Jersey, 1900 and 2000						
<i>Rank</i>	<i>1900</i>			<i>2000</i>		
	<i>Cause of Death</i>	<i>Number</i>	<i>Crude Rate</i>	<i>Cause of Death</i>	<i>Number</i>	<i>Crude Rate</i>
1	Acute lung diseases	4,795	254.6	Diseases of the heart	23,724	281.9
2	Consumption	3,514	186.6	Malignant neoplasms	18,073	214.8
3	Diarrheal diseases of children	3,010	159.8	Cerebrovascular diseases	4,316	51.3
4	Adult brain and spinal diseases	2,946	156.4	Chronic lower respiratory diseases	3,007	35.7
5	Diseases of heart and circulation	2,852	151.4	Diabetes mellitus	2,483	29.5
6	Deaths under one month of age	2,252	119.6	Unintentional injuries	2,284	27.1
7	Contagious diseases other than consumption	2,240	118.9	Influenza & pneumonia	2,044	24.3
8	Renal and cystic diseases	2,073	110.1	Septicemia	1,744	20.7
9	Brain and nervous diseases of children	1,767	93.8	Nephritis, nephrotic syndrome, & nephrosis	1,495	17.8
10	Violent deaths	1,712	90.9	Alzheimer's disease	1,267	15.1
11	Digestive and intestinal diseases	1,700	90.2	HIV disease	830	9.9
12	Cancer	921	48.9	Chronic liver disease & cirrhosis	765	9.1
13	Puerperal	288	15.3	Pneumonitis due to solids & liquids	574	6.8
14	Acute rheumatism	73	3.9	Suicide	560	6.7
	Residual	1,331	70.7	Residual	11,634	138.3
	Total	31,474	1,670.9	Total	74,800	889.0
Crude rates are computed per 100,000 population.						

The naming and grouping of causes of death has changed many times since 1900. Consumption is what we now call respiratory tuberculosis (TB). Deaths within the first month of life are now called neonatal deaths and are attributed to their various causes of death when ranked. There were 499 neonatal deaths in 2000, primarily due to low birth weight and congenital anomalies. Grouped together, there were 2,981 deaths due to infectious and parasitic (contagious) diseases in 2000 including deaths due to septicemia, HIV, and TB. Violent deaths included suicide and injuries, as there was no mention of homicide as a cause of death in the 1900 report. In 2000, there were 3,164 deaths due to unintentional injuries (accidents), suicides, and homicides. Puerperal conditions were those related to pregnancy and childbirth. There were 12 deaths due to complications of pregnancy, childbirth, and the puerperium in 2000.

Age at Death

Age at death has also changed greatly over the century. In 1900, only a quarter of decedents were 60 years old or more, but in 2000, the vast majority (82.3%) of decedents were 60 or over. One-third of deaths in 1900 occurred to persons under the age of five. In 2000, only one percent of deaths were in that age group.

Deaths by Age, New Jersey, 1900 and 2000				
Age Group	1900		2000	
	Number	Percent	Number	Percent
< 1 month	2,252	7.2	499	0.7
1 month - < 1 year	4,727	15.0	234	0.3
1-4 years old	3,474	11.0	94	0.1
5-19 years old	2,184	6.9	408	0.5
20-59 years old	10,650	33.8	11,986	16.0
60+ years old	8,028	25.5	61,562	82.3
Unknown	159	0.5	17	0.0
Total	31,474	100.0	74,800	100.0

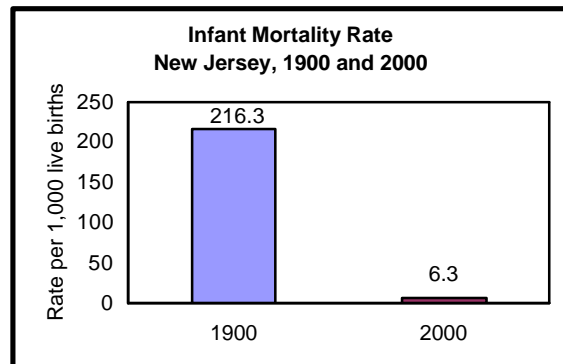
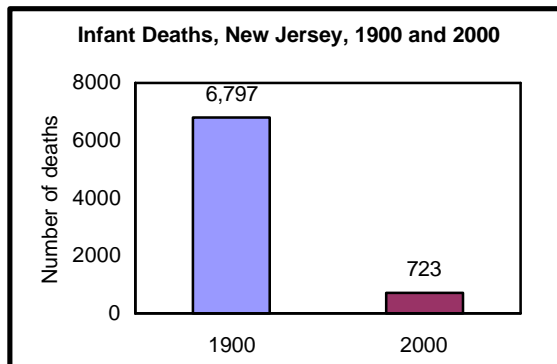


Infant and Early Childhood Mortality

One of the most striking improvements in public health during the 1900s was the reduction in infant mortality rates. Infant deaths are deaths within the first year of life. Infant deaths are further classified as neonatal deaths if they occur in the first 27 days of life or postneonatal deaths if they occur from 28 days to one year of life. In the 1900 report, deaths were reported for those “under one month” and “under one year” of age, which approximate the current-day neonatal and postneonatal categories.

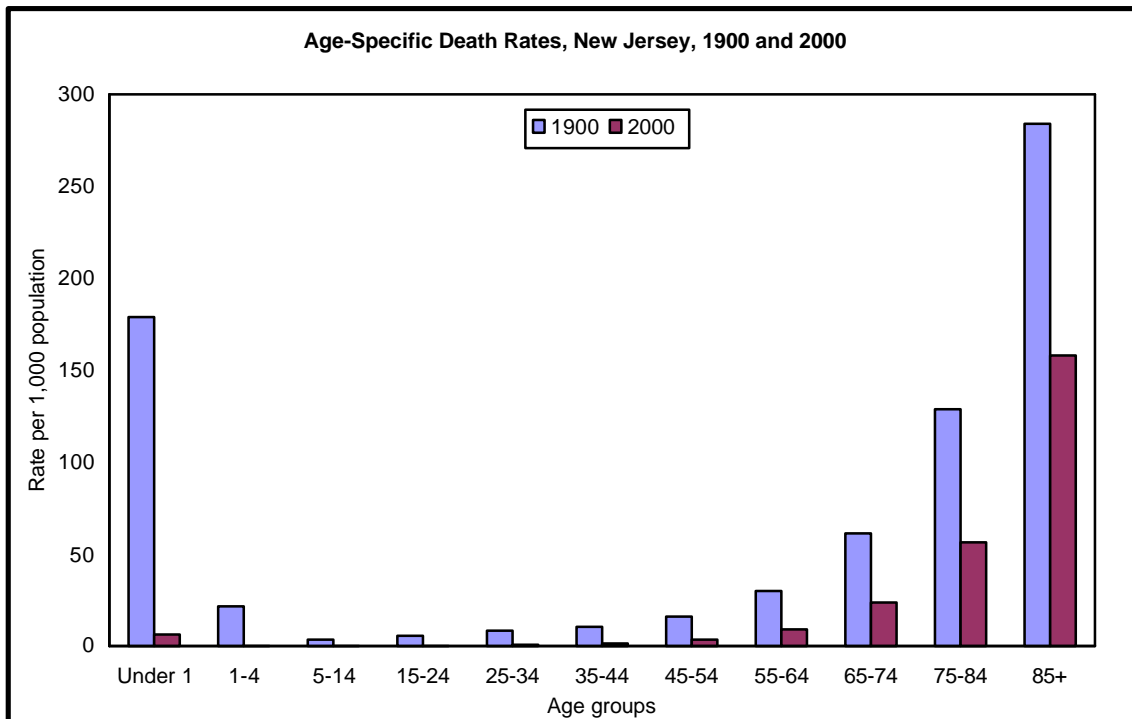
In 1900, there were 6,979 infant deaths; 2,252 (32%) were neonatal and 4,727 (68%) were postneonatal. The infant mortality rate was 216.3 per 1,000 births. In other words, over one-fifth of babies died in 1900 before reaching their first birthday.

There were 723 infant deaths in New Jersey in 2000. 499 (69%) were neonatal and 224 (31%) were postneonatal. Over 60% of the neonatal deaths occurred within one day of birth. The infant mortality rate was 6.3 per 1,000 births.



In addition to the 97% reduction in the infant mortality rate, there was an even larger reduction in deaths of children aged one through four. In 1900, there were 3,474 deaths of residents 1-4 years old. In 2000, that number was down to 94 and the age-specific rate had decreased 99%. Large reductions in age-specific death rates were seen in every age group, though they diminish with increasing age.

Age-Specific Death Rates, New Jersey, 1900 and 2000			
<i>Age Group</i>	<i>1900 Rate</i>	<i>2000 Rate</i>	<i>Percentage Decrease</i>
Under 1	178.7	6.6	96.3
1-4	21.5	0.2	99.1
5-14	4.0	0.1	97.5
15-24	5.6	0.6	89.3
25-34	8.5	1.0	88.2
35-44	10.9	1.9	82.6
45-54	15.9	4.0	74.8
55-64	30.2	9.2	69.5
65-74	61.4	23.5	61.7
75-84	129.1	56.5	56.2
85+	284.3	158.1	44.4
Rates are computed per 1,000 age-specific population.			



Deaths by Gender

Age-adjusted death rates for males and females were 2,901.9 and 2,509.2 per 100,000 standard population, respectively, in 1900. In 2000, the rates were 1,039.7 and 719.6, respectively. The age-adjusted death rate for males decreased 64.2% during the century while the rate for females decreased 71.3%. In 1900, the rate for males was 15.7% higher than the rate for females. By 2000, the gap had widened substantially and the rate for males was 44.5% higher than that of females.

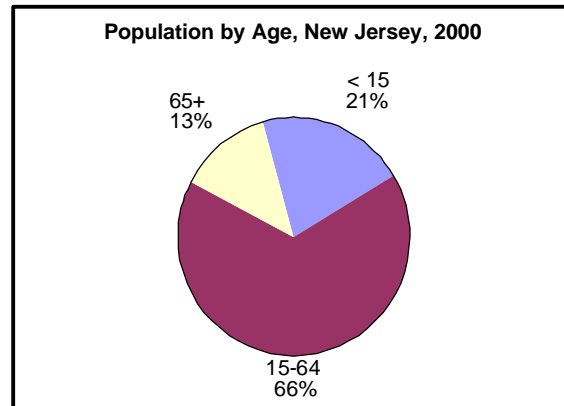
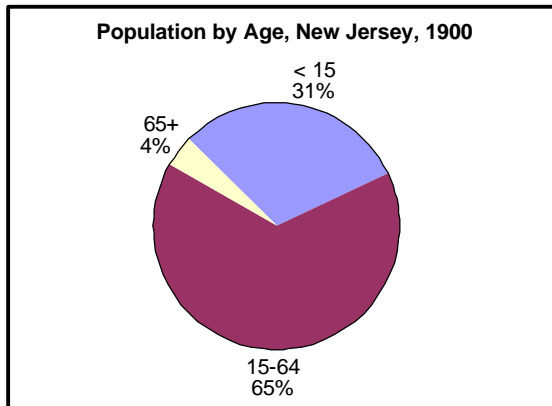
Deaths by Race

In 1900, race of decedents was only reported as white or nonwhite. However, since 98% of the nonwhite population in New Jersey was black, it can be assumed that virtually all of the deaths reported as nonwhite were black.

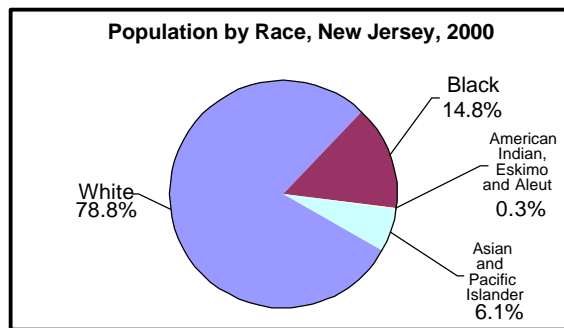
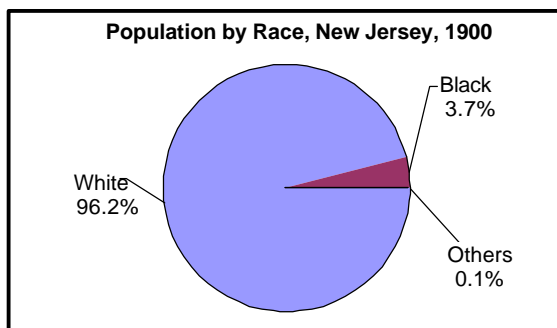
Age-adjusted death rates for whites and nonwhites were 2,679.2 and 3,204.4 per 100,000 standard population, respectively, in 1900. In 2000, the rates for whites and blacks were 831.6 and 1,107.7, respectively. The rate for whites decreased 69.0% during the century while the rate for blacks decreased 65.4%. In 1900, the rate for nonwhites was 19.6% higher than the rate for whites. By 2000, the gap had widened to 33.2%.

Population

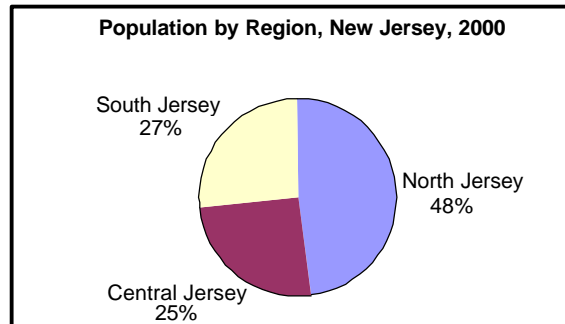
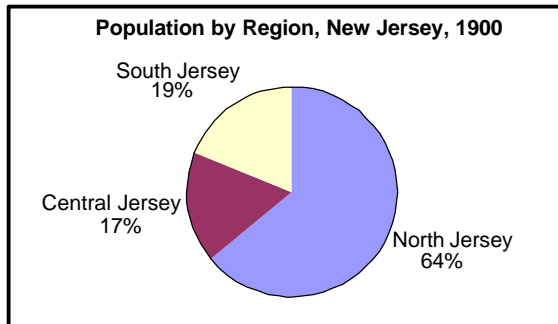
Our population is now much older. In 1900, life expectancy in the United States was 47.3 years. In 2000, it was 76.9 (77.6 for New Jersey residents). The proportion of the population that was 65 and over in 2000 was more than three times the 1900 proportion.



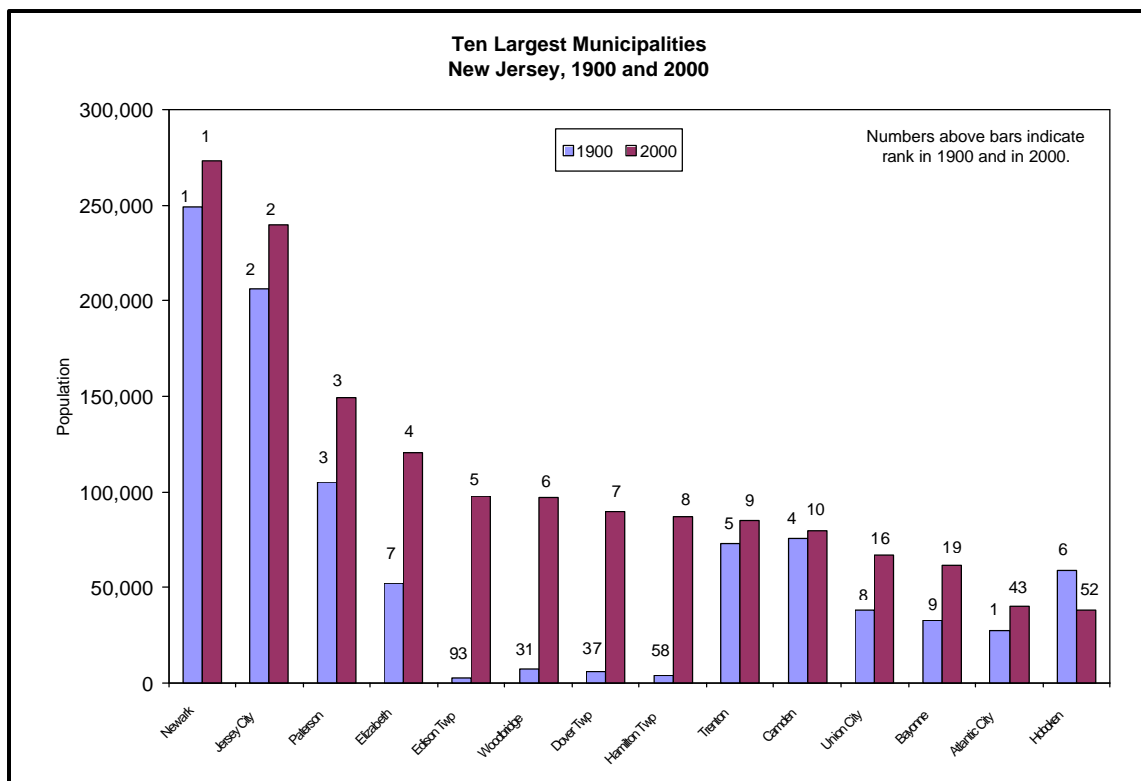
Our population has become more diverse racially and ethnically. In 1900, only 3.8% of New Jerseyans were not white. By 2000, more than one-fifth of the population was a race other than white.



More of our population is living in Central and South Jersey. In these graphs, North Jersey is Bergen, Essex, Hudson, Morris, Passaic, Sussex, Union, and Warren Counties. Central Jersey is Hunterdon, Mercer, Middlesex, Monmouth, and Somerset Counties. South Jersey is Atlantic, Burlington, Camden, Cape May, Cumberland, Gloucester, Ocean, and Salem Counties.



Despite the reduction in the share of the population in North Jersey, the three largest cities in 1900 were the same in 2000: Newark, Jersey City, and Paterson with a combined population of 557,674 in 1900 and 662,823 in 2000.



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